

### ABSTRACT

A miniaturized integrated sensor (50) useful for indicating the presence of a sample analyte is disclosed. The sensor (50) has a platform (52) with an upper surface (53) and a detector (62), light source (60), waveguide (58), and reflective fixtures (60,62) embedded in the platform (52). The light source (60) is preferably a light emitting diode and sits in a cup-shaped dimple (68) that directs light from the light source (60) toward one of the reflective fixtures (64) to uniformly distribute light across the waveguide (58). The waveguide (58) is coupled to an upper surface (53) of the sensor platform (52) and is coated with a thin film of indicator chemistry (70) which interacts with the sample analyte to produce optic signal changes that are measurable by the detector (62). A lead frame (51) in the platform (52) has pins (54, 55, 56) which provide the interface to the outside world. In one embodiment, sensor package (100) has a unique shape that requires a predetermined insertion and removal into an instrument harness or other similar application.